



Transit Bus Fleet Rule Implementation Update

November 2003

California Environmental Protection Agency



Air Resources Board

Today's Presentation

- Changes to the Regulation
- Non-Compliance
- Requirements for 2004
 - ▶ Reports Due 1/31/04
 - ▶ Retrofit
- 2004 - 2006
- Proposed 2004 Amendments

Regulation Changes

- October 2002 Amendments Finalized
- Compliance Path Change, SCAQMD
- Definitions
 - ▶ Alternative Fuel
 - ▶ Active Fleet
 - ▶ Emergency Contingency
 - ▶ Spare Bus

Regulation Changes (continued)

- Alternative Fuel Bus Purchases by Diesel Path Transit Agency
- Reducing Total Diesel PM Emissions
 - ▶ PM Reduction from 2002 Baseline
 - ▶ Technology Delay
 - ▶ Verified Fuel Use
 - ▶ Small Transit Agency Delay
 - ▶ DECS Allowances

Regulation Changes (continued)

- Reducing Total Diesel PM Emissions
 - ▶ Use of ARB Verified DECS or ARB Certified Rebuild Kit
- Financial Hardship Delay for Small T.A.
- Reporting Requirements
- Deleting Certification Procedures for PM Retrofit Devices
- Adding Interim Certification for HEB

ARB Actions on Non-Compliance

- Issued Notices of Violation to seven T.A.s for not meeting NOx fleet average by 10/1/02
- Sent warning letters to seven T.A.s for late 2003 reports
- Violations of reporting and failure to meet PM reductions will result in NOVs in the future

Reports Due in 2004

For 2003

Reporting Requirements

- Annual Report Due 1/31/04:
 - ▶ Number, Engine Mftr & Make, Engine Model Year For All Engines in Buses, and Fuel Used
 - ▶ Alt.-Fuel Path List Bus Purchases & Leases, and Percentage of Alt. Fuel Buses Purchased or Leased

Reporting Requirements (continued)

- Transit Agency Changing Fuel Path from Diesel to Alt.-Fuel Must Report Change by January 31, 2004 (SCAQMD Only)

Reporting Requirements (continued)

- Total Diesel PM Emission Reduction
 - ▶ Annual Report Due 1/31/2004
 - ▶ No., Mft., Make, & Model Year of all Diesel-fueled, Dual-fuel, Bi-fuel, and Diesel HEB
 - ▶ PM Engine Cert. Values & Total PM
 - ▶ Identification for DECS Used
 - ▶ Percentage Reduction Achieved

Actions Required in 2004

By Transit Agencies

Low-Sulfur Diesel Fuel

- Continue Using Low Sulfur Diesel Fuel
 - ▶ <15 parts per million (ppm) Sulfur
- May Use a Fuel that is Verified as a DECS Instead to Meet PM Reductions
 - ▶ None Verified Yet

NOx Fleet Average

- Maintain NOx Fleet Average
 - ▶ Applies to all transit agencies
 - ▶ 4.8 g/bhp-hr NOx
 - ▶ October 1, 2002

Total Diesel PM Reduction

- By January 1, 2004, Reduce Total PM:
 - ▶ Diesel Path by 40%
 - ▶ Alternative Fuel Path by 20%
 - ▶ Relative to January 1, 2002, Baseline

Diesel PM Reduction Schedule

Fuel Path	2004	2005	2007	2009
Diesel Path	40%	60%	85%	85%
Alt-Fuel Path	20%	40%	60%	85%

Percentages of retrofit requirements must be met by January 1 of each year.

Diesel PM Reduction (continued)

- Compliance Extension
 - ▶ Agencies with <20 Buses in 1-Hr. Ozone Attainment Districts May Delay 100% Implementation to 1/1/2007 (Diesel Path) or 1/1/2009 (A-F Path)
 - ▶ Notify ARB in Annual Report

PM Retrofits

- Delays
 - ▶ Unavailability of Technology
 - Apply no later than 90 days prior to deadline
 - Demonstrate why technology is unavailable, why can't comply by retiring old buses, and provide schedule of compliance
 - ▶ Small Transit Agency (<20 buses) Delay
 - Financial Hardship
 - Apply no later than 30 days prior to deadline

2004 - 2006 Engines

Section 1956.1

Engine Options

2004-2006

- New Engines: Only Alt. Fuel Available
- Repower: Must be at or below all Emissions Standards and Requirements Applicable to the Original Engine
 - ▶ May Not “Repower” with Current Year Engine
 - ▶ May Not Use Aftertreatment to be at or below Standards on New Engines

Potential Amendments

2004

Urban Bus Engine Standards

- Proposal to Harmonize with U.S. EPA 2007 HDD Engine Standards
- Proposal to Allow Early Introduction of 2007 Technology in 2004 - 2006

Fleet Rule For Transit Agencies

- New Section Numbers
- Definition Modification
 - ▶ Remove “Non-Controlling” Part of Definition
 - ▶ Focus Remains on Type of Engine and Duty
- PM Reduction Floor Set to an Average of 0.01 g/bhp-hr
- Reduce the NOx Fleet Average

Non-Urban Bus

- Define Non-Urban Buses:
 - ▶ Buses with medium-heavy and heavy-heavy engines currently not subject to the regulation
- Add Reporting Requirements for NUB
- Brings in Transit Agencies Not Previously Subject to Rule

Non-Urban Bus: Emission Reduction

- PM Reduction
 - ▶ Mirrors 2002 Transit Rule Amendment requirements
 - ▶ % reduction of baseline year overtime
 - ▶ Repower, replace or retrofit
- NOx Reduction
 - ▶ Fleet Average Approach

Survey

- Non-urban buses
 - ▶ Vehicle type and model year
 - ▶ Engine manufacturer, model, and model year
 - ▶ Fuel used
 - ▶ Power system

Zero-Emission Bus Rule

Summary

- 7/1/03 - Start ZEB Demonstration Project
- 1/31/05 - Final Project Report to ARB
- 1/31/06 - ZEB status report to the Board

Requires 15% of purchases to be ZEB

- ▶ 2008-15, Diesel Path
- ▶ 2010-15, Alternate Fuel Path

Zero-Emission Bus Rule

Status

- ZEB demonstration 18 to 32 months behind schedule
- Bus cost greater than anticipated during February 2000 rulemaking

ARB Website :

www.arb.ca.gov/msprog/bus/bus.htm

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list name: diesel-retrofit